

Amendments to the Specification:

Please replace paragraph [0050] with the following amended paragraph:

[0050] An alarm condition classifier 35 may then identify the nature of the alarm condition detected by the alarm condition detector. The functions of detecting an alarm condition 30 and classifying the alarm condition 35 (i.e. identifying the type of alarm condition) would be performed by the same process or step. For example, in a classification engine such as a Bayesian classifier or neural network, many inputs are combined to "recognize" the current system status. Determining the status, for example: patient has lost a significant amount of blood, could be a classification derived from multiple simultaneous inputs, for example: elevated heart rate, fluid detected outside blood circuit, air detected inside blood circuit, and patient weight dropping slightly. Each of these different inputs contribute to varying degrees and ways depending on the values of other inputs according to how the classifier is programmed. In sophisticated systems that make use of artificial-intelligence, the interaction of the inputs can be complex. But, from the overarching perspective, many inputs are combined to generate a current status signal and that status signal is either a normal status or an aberrant status, the latter being one for which an alarm may be generated. Thus, the process of classifying the status includes detecting an alarm condition. The alarm condition classifier 35 provides an output signal to alarm controller 40, which in turn, provides an alarm output via Output A – Output N (45-55).